
SOLANUM TOLIARAEA, A NEW SPECIES FROM MADAGASCAR

Solanum toliaraea D'Arcy & Rakotozafy, sp. nov. TYPE: Madagascar: *D'Arcy & Rakotozafy 15460* (holotype, MO; isotypes, K, P, TAN).

Frutex armatus spinis brevibus validis rectis, foliis rotundis parvis stellato-tomentosis; flores solitari v-geminati, calyce inermi sed in statu fructu accrescenti, echiniformi, acinum tegenti.

Slender, branched shrub or tree to 3 m tall; twigs slender, at first appressed tomentose with reddish hairs, soon puberulent with reduced buff-colored trichomes and deeply furrowed, armed with short, stout-based, nearly straight, puberulent spines. Leaves mostly paired in fasciculate short-shoots, entire, rotund, apically rounded, basally rounded, truncate or cordate, mostly 8–20 mm long, thick, felty with dense short-stalked, stellate hairs, the costa evident, the minor venation obscure; peduncles canaliculate adaxially but often appearing terete because of the dense tomentum, mostly 5–10 mm long, with occasional small straight spines. Inflorescences solitary flowers or paired fascicles from the leafy short-shoots; pedicels resembling the petioles but somewhat longer. Flowers with calyx ca. 4 mm long, lobed about $\frac{1}{3}$ way down, the lobes convex, obtuse, tomentose, unarmed; corolla pale purple, mauve, or white, ca. 10 mm long, lobed $\frac{1}{3}$ way down, tomentose outside except on the membranaceous inter-lobe fringing areas, glabrous within, the nervature drying conspicuous within; stamens 5, equal, the anthers yellow, slender, 5 mm long, opening by minute terminal pores; ovary glabrous, drying somewhat lobed, the style slender, exerted slightly beyond the stamens, with a few short, gland-tipped simple hairs near the base. Berry green, juicy, 4-lobed, ca. 5 mm diam., entirely but loosely enveloped in the calyx, the spiny, accrescent calyx echinoid, subglo-

bose, ca. 2 cm diam.; seeds (*Descoings 2375*) compressed, dark, 2.5 mm long.

At time of flowering the calyx of this species is devoid of spines, in contrast to its copiously spiny, echinoid condition when in fruit.

Collections of this species were first confused with *Solanum dubium* Fresen of Ethiopia, which has similar spiny accrescent calyces, but that species is herbaceous and has much larger, lobed leaves. The species described here differs from the other two arborescent species of southwestern Madagascar in its accrescent, spiny calyx and in its rotund, concolorous leaves. *Solanum toliaraea* is sympatric, at least in part, with other arborescent solanums, *S. bummeliifolium* Dunal and *S. heineanum* D'Arcy & Keating, which differ in usually spineless calyces and porrect, scutellate hairs.

Solanum toliaraea was seen as scattered individuals in didieriad woodlands of southwestern Madagascar. Most collections were made from plants growing on sand near the coast just north of the major city of Tulear and hence just north of the Tropic of Capricorn.

The name *toliaeraea* is derived from the Malagasy spelling for the city of Tulear.

Material seen. MADAGASCAR: TULEAR (Toliary): bush à *Didierea* sur dunes, embouchure de Fiherenana, Belalanda, Nov. 1956, *Bosser 10472* (MO, P); scrub forest on pure shifting sand, 8 km N of Tulear on road to Morombe, 5 Feb. 1975, *Croat 30778* (MO); road to 5 km N of Belalanda, 17 May 1983, *D'Arcy & Rakotozafy 15460* (MO, K, P, TAN); Sable, Manombo, région de Tuléar, *Decary 16214, 18714* (P); route de Manombo sur sable, 7 Jan. 1957, *Descoings 2375* (MO); bush à *Didierea* sur dunes, embouchure de Fiherenana, Belalanda, May 1960, *Keraudren 690* (P); bush à Euphorbiés, route de Monombo, près de la côte, environs de Tuléar, 3 Nov. 1960, *Léandri & Jean de Dieu 3627, 3635, 3804* (P); thorn scrub of *Euphorbia* and *Didierea* on

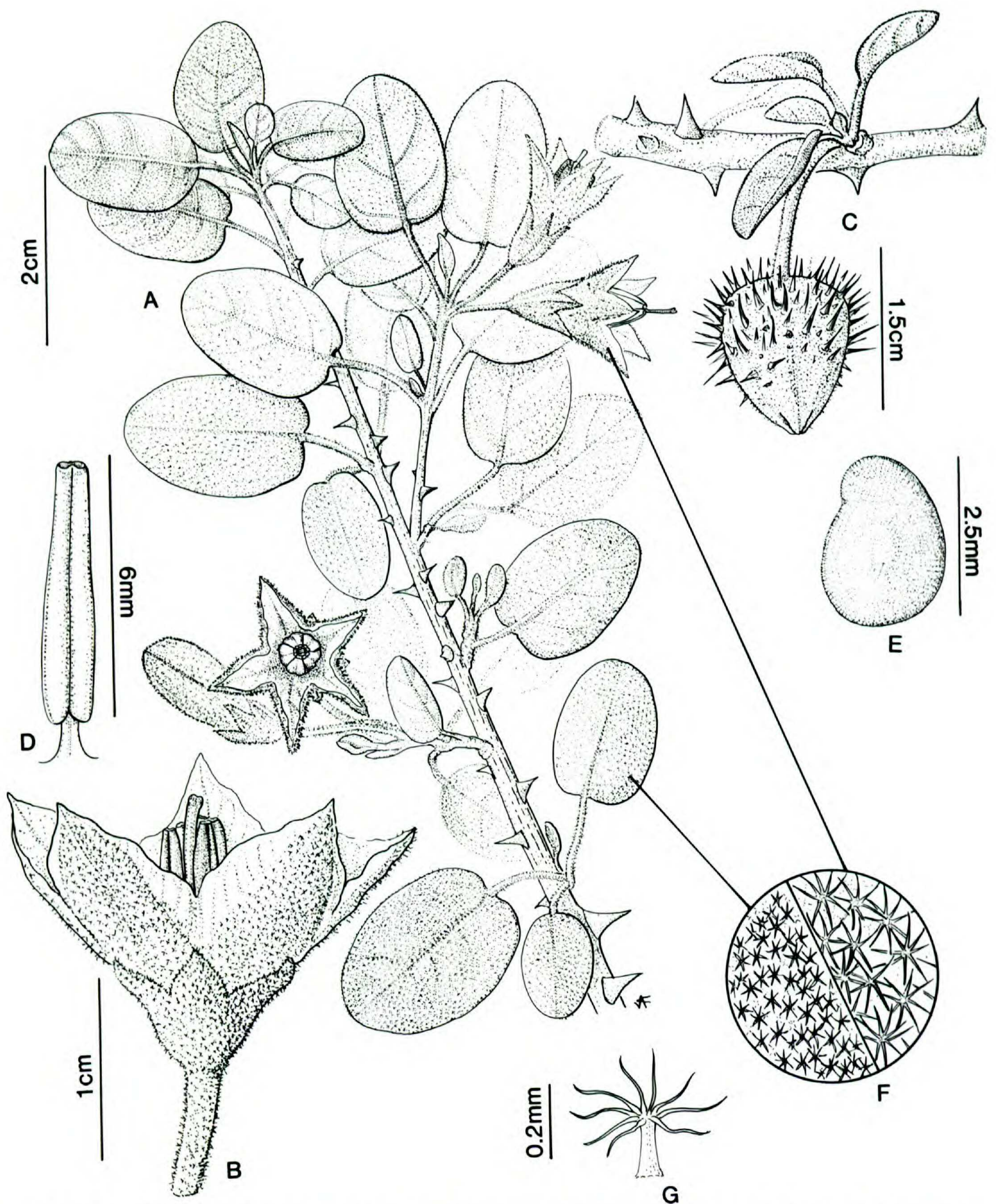


FIGURE 1. *Solanum toliaraea*.—A. Habit.—B. Flower.—C. Fruit.—D. Stamen.—E. Seed.—F. Indument.—G. Trichome from leaf. (E after *Descoings 2375*, other figures after *D'Arcy & Rakotozafy 15460 [MO]*.)

sand dunes behind littoral, Route Nationale no. 9, 15 km N of Tulear, 12 Nov. 1978, *Lorence 1940 (MO)*.

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